RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _____ 10/575,362 _____

Source: _____ IFWP, _____

Date Processed by STIC: _____ 04/25/2006 _____

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: _10/575, 362_   CRF Edit Date: _04/25/2006_
                                   Edited by: _DA_

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

____ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

_✓__ Deleted: ____ invalid beginning/end-of-file text ; ____ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

_____

____ Moved responses to same line as heading/numeric identifier, specifically:

_____

____ Other:

_____
_____
_____

Revised 09/09/2003

IFWP

RAW SEQUENCE LISTING   DATE: 04/25/2006
PATENT APPLICATION: US/10/575,362   TIME: 14:55:09

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\04252006\J575362.raw**

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    3  <110> APPLICANT: Bayer HealthCare AG
    5  <120> TITLE OF INVENTION: Diagnostics and Therapeutics for Diseases Associated with N-
Acetylated
    6        Alpha-Linked Acidic Dipeptidase 2 (NAALADASE 2)
    8  <130> FILE REFERENCE: BHC 03 01 004
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/575,362
C--> 10 <141> CURRENT FILING DATE: 2006-04-11
   10  <160> NUMBER OF SEQ ID NOS: 5
   12  <170> SOFTWARE: PatentIn version 3.1
   14  <210> SEQ ID NO: 1
   15  <211> LENGTH: 3152
   16  <212> TYPE: DNA
   17  <213> ORGANISM: Homo sapiens
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   22  atggtgggct ggtttattaa gcctctcaaa gaaacaacca cttctgtgcg ctatcatcaa    180
   23  agtatacggt ggaaactggt atccgaaatg aaagctgaaa acatcaaatc atttcttcgt    240
   24  tcttttacaa agcttcctca tctggcagga acagaacaaa atttcttgct tgccaagaaa    300
   25  atccaaaccc agtggaagaa atttggacta gattcagcca agttggttca ttatgatgtc    360
   26  ctcttatctt accccaatga gacaaatgcc aactatatat cgattgtgga tgaacatgaa    420
   27  actgagattt tcaaaacatc ataccttgaa ccaccaccag atggctatga gaatgttaca    480
   28  aatattgtgc caccatataa tgctttctca gcccaaggca tgccagaggg agatcttgta    540
   29  tatgtgaact atgctcgcac tgaagacttt ttcaaactag aaagagagat gggcatcaac    600
   30  tgtactggga agattgttat tgcaagatat ggaaaaatct tcagaggaaa taaagttaaa    660
   31  aatgccatgt tagcaggagc cataggaatc atcttgtact cagatccagc tgactacttt    720
   32  gctcctgagg tacagccata tcccaaagga tggaatcttc ctggaactgc agcccagaga    780
   33  ggaaatgtgt taaatttgaa tggtgctggt gacccactca ctccaggcta tccagcaaaa    840
   34  gaatacactt tcagacttga tgttgaagaa ggagtgggaa tcccccgaat acctgtacat    900
   35  cccattggat ataatgatgc agaaatatta ttacgctact tgggaggaat tgctccacca    960
   36  gataagagtt ggaagggagc ccttaatgtg agttatagta tcggacctgg ctttacaggg   1020
   37  agtgattctt tcaggaaggt tagaatgcat gtttataaca tcaataaaat tacaaggatt   1080
   38  tacaatgtag ttggaactat cagaggatct gtggaacctg acaggtatgt tattctggga   1140
   39  ggtcaccggg actcctgggt atttggagct attgacccaa ccagtggggt tgctgttttg   1200
   40  caagaaattg cccggagttt tggaaaactg atgagtaaag ctggagacc tagaagaact   1260
   41  atcatttttg ccagctggga tgcagaagaa tttggacttc tgggttccac agaatgggct   1320
   42  gaggagaatg tcaaaatact ccaggagaga agcattgctt atatcaactc ggattcatct   1380
   43  atagaaggca attatactct cagagttgac tgtactcccc ttctttacca attagtgtat   1440
   44  aaactgacaa aagagatccc cagccctgat gatgggtttg agagtaaatc actgtatgaa   1500
   45  agctggttgg aaaaagaccc ttcacctgaa aataaaaatt tgcctagaat caataagctg   1560
   46  ggatctggaa gtgactttga agcttatttt cagagacttg gaattgcttc aggcagagcc   1620
   47  cgttacacta agaataagaa aacagataag tacagcagct acccagtgta ccacacaatt   1680
   48  tatgagacat ttgaattggt agagaaattt tatgacccca catttaaaaa acaactttct   1740
   49  gtggctcaat acgaggagca ctggtatat gagcttgtgg attctaaaat cattcctttt   1800
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RAW SEQUENCE LISTING   DATE: 04/25/2006
PATENT APPLICATION: US/10/575,362   TIME: 14:55:09

Input Set : A:\pto.da.txt
Output Set: N:\CRF4\04252006\J575362.raw

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52 gtgaaaaact tctcagaggc tgcttcagat tttcataaac gacttataca agttgatctt   1980
53 aacaatccca ttgcagtgag aatgatgaat gaccaactga tgctcctgga aagagcattc   2040
54 atcgatcctc ttggtttacc aggaaagctg ttctataggc acatcatatt tgctccaagt   2100
55 agccacaaca aatatgctgg agaatcattt cctggaatct atgatgctat ctttgatatt   2160
56 gaaaataaag ccaactctcg tttggcctgg aaagaact a agaaacatat ttctattgca   2220
57 gcttttacaa ttcaagcagc agcaggaact ctgaaagaag tattatagaa ggtctcaagt   2280
58 ggctagccat taaaggtgtt gctaaaagtc tgaggataaa attcaccttt ctgataactt   2340
59 atgaagccag ggtgttctaa actcttttca tgtcatgttt tgattatagg ctttggtctt   2400
60 ttcatctgca aagccttttt ttttttttgct cttttaaagt taataattat attagcaaag   2460
61 tgttaatcta atgaagtaaa aaactcctgt gtggcagaaa gtaaaagaaa attccctaaa   2520
62 ttatagcaag gaacatgaat tctcagacat tgtgagtgtg ggaatgtaaa atggtaaaat   2580
63 cacttttgaa aacagtttgg cagtttccta taaagttaaa catacacttt tactttagga   2640
64 ctccagaatt ccacttctag ttatttattc aagagaagga aaaacaatga tcacagcaat   2700
65 acttgtatgc atgttcattg caacttaaaa gcgtaaaaac cccaaatgtc catccacaga   2760
66 cgaatgtata aactgtggta tccattacac aatagactac ttactactca gcaataaaaa   2820
67 tgaagtaact ttcaataaat gcaatattat tggcagacat tgttgaagga aaaaagccag   2880
68 acaaacaact acataaaata tgtttctatt tagatgaagt ggcaaactaa tctgtagtgt   2940
69 taaaaattag attagtgatt gcctgggcca agtggcaggt tggggaggat ggctgcaaag   3000
70 aagtatgagg aaactttctc caatagatga gaattttccg tatcttgatc tgagtggcaa   3060
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72 attataaaaa aaaaaaaaaa aagggcggcc gc                                  3152
74 <210> SEQ ID NO: 2
75 <211> LENGTH: 740
76 <212> TYPE: PRT
77 <213> ORGANISM: Homo sapiens
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80 Met Ala Glu Ser Arg Gly Arg Leu Tyr Leu Trp Met Cys Leu Ala Ala
81 1               5                   10                  15
82 Ala Leu Ala Ser Phe Leu Met Gly Phe Met Val Gly Trp Phe Ile Lys
83                 20                  25                  30
84 Pro Leu Lys Glu Thr Thr Thr Ser Val Arg Tyr His Gln Ser Ile Arg
85             35                  40                  45
86 Trp Lys Leu Val Ser Glu Met Lys Ala Glu Asn Ile Lys Ser Phe Leu
87         50                  55                  60
88 Arg Ser Phe Thr Lys Leu Pro His Leu Ala Gly Thr Glu Gln Asn Phe
89 65                  70                  75                  80
90 Leu Leu Ala Lys Lys Ile Gln Thr Gln Trp Lys Lys Phe Gly Leu Asp
91                 85                  90                  95
92 Ser Ala Lys Leu Val His Tyr Asp Val Leu Leu Ser Tyr Pro Asn Glu
93                 100                 105                 110
94 Thr Asn Ala Asn Tyr Ile Ser Ile Val Asp Glu His Glu Thr Glu Ile
95             115                 120                 125
96 Phe Lys Thr Ser Tyr Leu Glu Pro Pro Asp Gly Tyr Glu Asn Val
97     130                 135                 140
98 Thr Asn Ile Val Pro Pro Tyr Asn Ala Phe Ser Ala Gln Gly Met Pro
99 145                 150                 155                 160
100 Glu Gly Asp Leu Val Tyr Val Asn Tyr Ala Arg Thr Glu Asp Phe Phe
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101                  165            170              175
102 Lys Leu Glu Arg Glu Met Gly Ile Asn Cys Thr Gly Lys Ile Val Ile
103              180            185              190
104 Ala Arg Tyr Gly Lys Ile Phe Arg Gly Asn Lys Val Lys Asn Ala Met
105          195            200              205
106 Leu Ala Gly Ala Ile Gly Ile Ile Leu Tyr Ser Asp Pro Ala Asp Tyr
107    210            215              220
108 Phe Ala Pro Glu Val Gln Pro Tyr Pro Lys Gly Trp Asn Leu Pro Gly
109 225            230            235              240
110 Thr Ala Ala Gln Arg Gly Asn Val Leu Asn Leu Asn Gly Ala Gly Asp
111              245            250              255
112 Pro Leu Thr Pro Gly Tyr Pro Ala Lys Glu Tyr Thr Phe Arg Leu Asp
113          260            265              270
114 Val Glu Glu Gly Val Gly Ile Pro Arg Ile Pro Val His Pro Ile Gly
115          275            280              285
116 Tyr Asn Asp Ala Glu Ile Leu Leu Arg Tyr Leu Gly Gly Ile Ala Pro
117    290            295              300
118 Pro Asp Lys Ser Trp Lys Gly Ala Leu Asn Val Ser Tyr Ser Ile Gly
119 305            310            315              320
120 Pro Gly Phe Thr Gly Ser Asp Ser Phe Arg Lys Val Arg Met His Val
121          325            330              335
122 Tyr Asn Ile Asn Lys Ile Thr Arg Ile Tyr Asn Val Val Gly Thr Ile
123          340            345              350
124 Arg Gly Ser Val Glu Pro Asp Arg Tyr Val Ile Leu Gly Gly His Arg
125          355            360              365
126 Asp Ser Trp Val Phe Gly Ala Ile Asp Pro Thr Ser Gly Val Ala Val
127    370            375              380
128 Leu Gln Glu Ile Ala Arg Ser Phe Gly Lys Leu Met Ser Lys Gly Trp
129 385            390            395              400
130 Arg Pro Arg Arg Thr Ile Ile Phe Ala Ser Trp Asp Ala Glu Glu Phe
131              405            410              415
132 Gly Leu Leu Gly Ser Thr Glu Trp Ala Glu Glu Asn Val Lys Ile Leu
133          420            425              430
134 Gln Glu Arg Ser Ile Ala Tyr Ile Asn Ser Asp Ser Ser Ile Glu Gly
135          435            440              445
136 Asn Tyr Thr Leu Arg Val Asp Cys Thr Pro Leu Leu Tyr Gln Leu Val
137    450            455              460
138 Tyr Lys Leu Thr Lys Glu Ile Pro Ser Pro Asp Asp Gly Phe Glu Ser
139 465            470            475              480
140 Lys Ser Leu Tyr Glu Ser Trp Leu Glu Lys Asp Pro Ser Pro Glu Asn
141              485            490              495
142 Lys Asn Leu Pro Arg Ile Asn Lys Leu Gly Ser Gly Ser Asp Phe Glu
143          500            505              510
144 Ala Tyr Phe Gln Arg Leu Gly Ile Ala Ser Gly Arg Ala Arg Tyr Thr
145          515            520              525
146 Lys Asn Lys Lys Thr Asp Lys Tyr Ser Ser Tyr Pro Val Tyr His Thr
147    530            535              540
148 Ile Tyr Glu Thr Phe Glu Leu Val Glu Lys Phe Tyr Asp Pro Thr Phe
149 545            550            555              560
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RAW SEQUENCE LISTING   DATE: 04/25/2006
PATENT APPLICATION: US/10/575,362   TIME: 14:55:09

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\04252006\J575362.raw**

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150 Lys Lys Gln Leu Ser Val Ala Gln Leu Arg Gly Ala Leu Val Tyr Glu
151             565             570             .    .   575
152 Leu Val Asp Ser Lys Ile Ile Pro Phe Asn Ile Gln Asp Tyr Ala Glu
153             580             585             590
154 Ala Leu Lys Asn Tyr Ala Ala Ser Ile Tyr Asn Leu Ser Lys Lys His
155         595             600             605
156 Asp Gln Gln Leu Thr Asp His Gly Val Ser Phe Asp Ser Leu Phe Ser
157     610             615             620
158 Ala Val Lys Asn Phe Ser Glu Ala Ala Ser Asp Phe His Lys Arg Leu
159 625             630             635             640
160 Ile Gln Val Asp Leu Asn Asn Pro Ile Ala Val Arg Met Met Asn Asp
161             645             650             655
162 Gln Leu Met Leu Leu Glu Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro
163             660             665             670
164 Gly Lys Leu Phe Tyr Arg His Ile Ile Phe Ala Pro Ser Ser His Asn
165         675             680             685
166 Lys Tyr Ala Gly Glu Ser Phe Pro Gly Ile Tyr Asp Ala Ile Phe Asp
167     690             695             700
168 Ile Glu Asn Lys Ala Asn Ser Arg Leu Ala Trp Lys Glu Val Lys Lys
169 705             710             715             720
170 His Ile Ser Ile Ala Ala Phe Thr Ile Gln Ala Ala Ala Gly Thr Leu
171             725             730             735
172 Lys Glu Val Leu
173             740
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176 <211> LENGTH: 20
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178 <213> ORGANISM: artificial sequence
180 <220> FEATURE:
181 <223> OTHER INFORMATION: forward primer
183 <400> SEQUENCE: 3
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187 <211> LENGTH: 20
188 <212> TYPE: DNA
189 <213> ORGANISM: artificial sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: reverse primer
194 <400> SEQUENCE: 4
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198 <211> LENGTH: 22
199 <212> TYPE: DNA
200 <213> ORGANISM: artificial sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: probe
205 <400> SEQUENCE: 5
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VERIFICATION SUMMARY   DATE: 04/25/2006
PATENT APPLICATION: **US/10/575,362**   TIME: 14:55:10

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\04252006\J575362.raw**

L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

Raw Sequence Listing before editing (for reference only)

IFWP

RAW SEQUENCE LISTING   DATE: 04/24/2006
PATENT APPLICATION: US/10/575,362   TIME: 16:24:48

          Input Set : A:\PTO.KD.txt
          Output Set: N:\CRF4\04242006\J575362.raw

      3 <110> APPLICANT: Bayer HealthCare AG
      5 <120> TITLE OF INVENTION: Diagnostics and Therapeutics for Diseases
Associated with N-Acetylated
      6   Alpha-Linked Acidic Dipeptidase 2 (NAALADASE 2)
      8 <130> FILE REFERENCE: BHC 03 01 004
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/575,362
C--> 10 <141> CURRENT FILING DATE: 2006-04-11
     10 <160> NUMBER OF SEQ ID NOS: 5
     12 <170> SOFTWARE: PatentIn version 3.1

**Does Not Comply
Corrected Diskette Needed**

(p3 -1)

ERRORED SEQUENCES

    197 <210> SEQ ID NO: 5
    198 <211> LENGTH: 22
    199 <212> TYPE: DNA
    200 <213> ORGANISM: artificial sequence
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    203 <223> OTHER INFORMATION: probe
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E--> 210 - 5 -
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E--> 215 - 1 -   ──→ deleted

VERIFICATION SUMMARY   DATE: 04/24/2006
PATENT APPLICATION: **US/10/575,362**   TIME: 16:24:49

Input Set : **A:\PTO.KD.txt**
Output Set: **N:\CRF4\04242006\J575362.raw**

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L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:208 M:254 E: No. of Bases conflict, LENGTH:Input:3 Counted:25 SEQ:5
L:208 M:112 C: (48) String data converted to lower case,
M:254 Repeated in SeqNo=5
M:112 Repeated in SeqNo=5
L:215 M:252 E: No. of Seq. differs, <211> LENGTH:Input:22 Found:28 SEQ:5